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(54) **CORROSION MONITORING SYSTEM**

(57) A corrosion monitoring system for monitoring the rate of corrosion with a dedicated sensor and an optional measurement device. In such a system, the sensor is covered at least partially with a layer of material that corrodes in the application environment at a rate, which

is comparable with the monitored material. The penetration of the layer of material on the sensor causes a change of the properties of the sensor element, which can be detected through an in-built mechanism or an external measurement device.

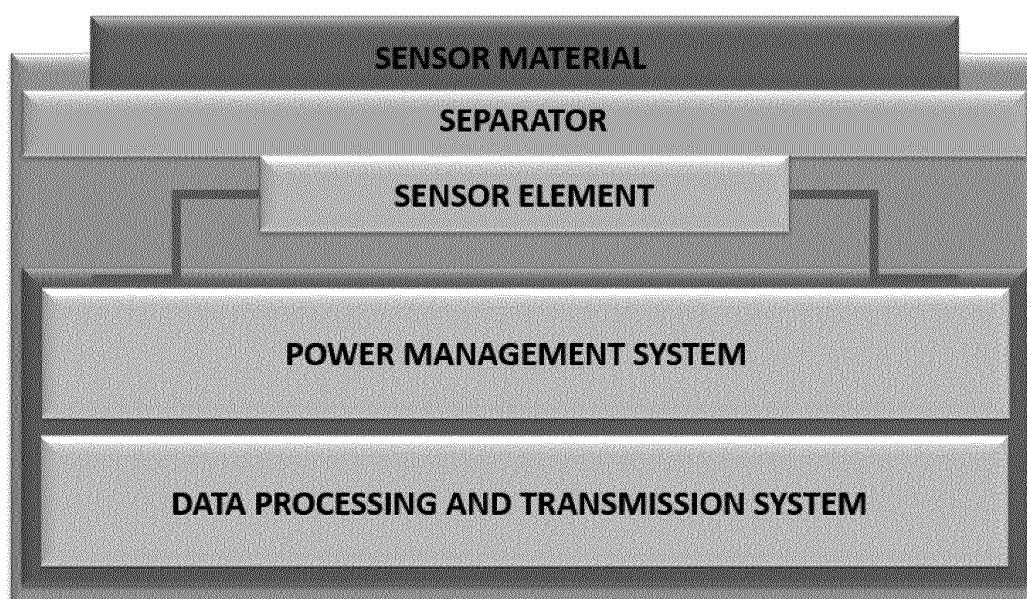


FIG 1

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2018/006006 A1 (ANALOG DEVICES INC [US]; METIS DESIGN CORP [US] ET AL.) 4 January 2018 (2018-01-04) * paragraph [0005] - paragraph [0065]; figures 1-4, 6 *	1-7,33	INV. G01N17/04
X	US 2015/260633 A1 (HEDTKE ROBERT C [US] ET AL) 17 September 2015 (2015-09-17) * paragraph [0028] - paragraph [0054]; figures 1, 2, 4, 5, 6A-6D *	1-7,33	
X	US 2019/178784 A1 (GOODWIN SCOTT [US] ET AL) 13 June 2019 (2019-06-13) * paragraph [0011] - paragraph [0061]; figures 1, 3A, 3B *	1-7,33	
			TECHNICAL FIELDS SEARCHED (IPC)
			G01N
<div> <div>1</div> <div> <p>The present search report has been drawn up for all claims</p> </div> </div>			
Place of search		Date of completion of the search	Examiner
The Hague		6 August 2021	Stavroulakis, E
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-7, 33

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7, 33

Protecting the sensor element.

2. claims: 8-22, 28, 30

Optimising the sensing of corrosion.

3. claims: 23-27, 29, 31, 32

Optimising power supply.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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06-08-2021

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